

DETAILED ACTION

Applicant's response and claim amendments filed on 03/29/2010 are duly acknowledged.

Claims 1-13, 15 and 16 are currently pending in this application.

Drawings

The substitute drawings filed 03/29/2010 are accepted.

EXAMINER'S AMENDMENT

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with **Gerald M. Murphy** (attorney of record) on June 21st 2010.

The application has been amended as follows:

In the Specification

At page 4, "Short Description of the Drawings" replace the first paragraph as follows.

Figure 1 represents one preferable embodiment of the sampler device and treatment/culturing device of the invention used in the example. Fig 1A shows an array of samplers as protrusions. Fig. 1B shows an array of recessions in the culture device. Fig. 1C shows that several of the recessions in the culture device show growth prevention of biofilm.

In the Claims

Claims 11-13 have been canceled by this examiner's amendment.

A complete set of claims to be allowed by this amendment are presented below:

1. (Currently Amended) A method for determining the effectiveness of anti-biofilm agents in a paper-making or board-making process line, said process comprising:

(a) ~~subjecting~~ inserting a sampler device in the process line for a period of time to enable ~~said~~ microorganisms to form a biofilm *in situ* on the surface of the sampler,

(b) treating the surface of the sampler with said formed biofilm thereon in a solution of a test anti-biofilm agent in a treatment device for a period of time, then

(c) contacting the surface of the sampler with said biofilm thereon with a liquid growth medium in a recession of a culturing device for a period of time, then

(d) removing the growth ~~solution~~ medium and the surface of the sampler from the recession of said culturing device and detecting qualitatively and/or quantitatively the presence or absence of biofilm-forming microorganisms adhered on the walls of the recession.

2. (Currently Amended) The method according to claim 1, ~~characterized in that wherein,~~ after the biofilm formation in step (a), said surface of the sampler is ~~(b)~~ treated in step (b) with the solution of the test anti-biofilm agent for the selection of the most efficient anti-biofilm agent.

3. (Currently Amended) The method according to ~~any of the preceding claims 1 or 2,~~
~~characterized in that wherein, in step (a) subjecting a the~~ sampler device is inserted in the process
line for a period of 12 ~~h-hours~~ to 3 d days, ~~in step (b) effecting the treatment step is performed~~
with the solution of a test anti-biofilm agent for a period of 10 minutes to 4 hours, between the
ambient temperature and 65 °C, ~~and then in step (c) effecting the culturing step is performed,~~
~~preferably optionally~~ with shaking, in ~~a the~~ liquid growth medium in ~~a the~~ recession of ~~a the~~
culturing device for a period of for 8-48 h hours, at the temperature between the ambient
temperature and 65 °C.

4. (Currently Amended) The method according to claim 1, ~~characterized in that wherein,~~
in step (b) the treatment is effected performed in a the treatment device provided with a recession
which is filled with a solution comprising the test anti-biofilm agent and a liquid growth
medium, sterilized water and/or process water by immersing said surface of the sampler in said
solution.

5. (Currently Amended) The method according to claim 1, ~~characterized in that wherein~~
the step (c) is ~~effected~~ performed in a the culturing device provided with a recession which is
filled with the liquid growth medium by immersing said surface of the sampler in said solution.

6. (Currently Amended) The method according to claim 1, ~~characterized in that wherein,~~
in step (d) the sampler surface and the growth solution medium is are removed from the
recession of the culturing device, the recession is optionally washed and any biofilm-forming

microorganisms adhered on the walls of the recession are stained and the presence and/or intensity of the color formation in the recession is detected qualitatively or quantitatively.

7. (Currently Amended) The method according to claim 1, ~~characterized in that wherein,~~
in step (a) the sampler device comprises a plurality of elongated protrusions connected to a support, whereby, when ~~brought~~ inserted into the process line, the biofilm is formed on the surface of the protrusions.

8. (Currently Amended) The method according to claim 7, ~~characterized in that wherein,~~
in step (b) the treatment device ~~is provided with~~ comprises a plurality of recessions containing a solution comprising one or more test anti-biofilm agents in one or more concentrations, one test anti-biofilm agent at one concentration in each recession, and said solution without any test anti-biofilm agent as a reference, and that the protrusions of said sampler removed from the process line are immersed in said solution in the recessions; such that one protrusion is immersed in each recession.

9. (Currently Amended) The method according to claim 8, ~~characterized in that wherein,~~
in step (c) the culturing device comprises a plurality of recessions containing the liquid growth medium, and that the protrusions of said sampler, treated in step (b), are immersed in said growth ~~solution~~ medium in the recessions of the culturing device; such that one protrusion is immersed in each recession.

10. (Currently Amended) The method according to claim 1, ~~characterized in that~~ wherein the sampler device comprises a plurality of pins or pegs arranged in rows and fixed from one end on a support plate, and the treatment device of step (b) and the culturing device of step (c) are multi-well plates provided with a plurality of wells arranged in rows and adapted for receiving one protruding pin ~~in one~~ per well so that each pin of the sampler device sits in each well of the plate of the treatment and culturing device.

15. (Currently Amended) The method of claim 3, wherein the treatment step (b) is ~~effected~~ performed with the solution of a test anti-biofilm agent for a period of 1 to 2 hours at a temperature of 40 to 60 °C.

16. (Currently Amended) The method of claim 3, wherein the culturing step (c) is ~~effected~~ performed with shaking in a ~~the~~ liquid growth medium in a ~~the~~ recession of a ~~the~~ culturing device for a period of 8 to 24 hours at a temperature of 40 to 60 °C.

Conclusions

Claims 1-10, 15 and 16 are allowed

Any inquiry concerning this communication or earlier communications from the examiner should be directed to SATYENDRA K. SINGH whose telephone number is (571)272-8790. The examiner can normally be reached on 9-5MF.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, JON P. WEBER can be reached on 571-272-0925. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 1657

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Satyendra K. Singh/
Examiner, Art Unit 1657

/JON P WEBER/
Supervisory Patent Examiner, Art Unit 1657